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CANTOR COLBURN, LLP
20 Church Street
22nd Floor
Hartford, CT 06103

EXAMINER

SHERWIN, RYAN W

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2612

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/564,607
Filing Date: June 05, 2006
Appellant(s): BECKER ET AL.

Cantor Colburn, LLP
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed February 22, 2010 appealing from the Office action mailed November 19, 2009.

Art Unit: 2612

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

1 and 3-7.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

Art Unit: 2612

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

6,961,443	Mahbub	11-2005
6,239,695	Okada et al.	5-2001

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. Claims 1 and 3-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mahbub in view of Okada.

With respect to claim 1, Mahbub discloses an occupant sensor having the following

Art Unit: 2612

claimed subject matter: the claimed passenger occupancy sensing device met by the occupant sensor (see Abstract); the claimed seat belt buckling status sensing device met by the image analysis system which may be used to sense a buckling status of a seat belt (Column 8, Lines 49-51); the claimed optical imaging system met by the imaging system (see Abstract) and the claimed image evaluation unit met by the image processor (Column 15, Lines 5-7). However, Mahbub does not specially disclose the claimed warning signal and evaluating the image with contours and/or edges.

Although not explicitly stated by Mahbub that the analysis is done on the basis of contours and/or edges contained in said image, Mahbub does disclose the use of surface characteristics to find the seatbelt's elongated and curved shape (Column 8, Lines 49-51 and Column 13, Lines 17-33). It would have been obvious to one of ordinary skill in the art at the time the invention was made that in order to determine the elongated and curved shape of the seatbelt, a system must conform to the requirements of locating and analyzing the contours and/or edges of the seatbelt.

As shown in Mahbub, the purpose of the reference is to ascertain the usage of the seatbelt so to ensure passenger safety. Thus, it would be advantageous to have the well known feature of a warning to notify the driver/passenger about the usage of the seatbelt as demonstrated in Okada.

Okada teaches a system for detecting seat occupancy and seat belt fastening, then adds a device for outputting a warning signal (see Abstract).

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to add the warning device of Okada to the invention of Mahbub because it is

Art Unit: 2612

not a safe driving condition for a driver or passenger to be in a vehicle without a seatbelt and alerting the driver or passengers to this condition is an effective and efficient way to quickly change an unsafe condition into a much more safe one.

Regarding claim 3, Mahbub and Okada render obvious the seat-belt warning device as claimed in claim 1 and Mahbub further discloses that the claimed imaging system comprising a CMOS camera and/or a CCD camera as met by the CCD or CMOS camera of the image system (Column 3, Lines 59-63).

As to claim 4, Mahbub and Okada make obvious the seat-belt warning device as claimed in claim 1. Mahbub does not explicitly disclose a belt lock sensor.

However, as the applicant recognizes on Page 1, Lines 24-30 of the pending application, Okada teaches that the device for sensing a buckling status of a seat belt comprises a belt lock sensor (Column 2, Lines 53-57). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the lock sensor of Okada with the occupant sensor of Mahbub because the image analysis system will operate more efficiently and error free if it only looks for a seatbelt if it senses one is locked in place.

Concerning claim 5, Mahbub and Okada et al. render obvious the seat-belt warning device as claimed in claim 1 and Mahbub discloses the claimed device for sensing a buckling status of a seat belt is formed by the optical imaging system as seen in claim 1.

With respect to claim 6, Mahbub and Okada make obvious the seat-belt warning device as claimed in claim 5. Although Mahbub does not explicitly disclose markings on the seatbelt, it would have been obvious to one of ordinary skill in the art at the time the invention was that the seat belt must have one or more markings which are detectable by the optical system in order for

Art Unit: 2612

the surface characteristics to be separately detectable from the person or a design on the clothing of a person in order to increase the efficiency and accuracy of such a system.

As to claim 7, Mahbub and Okada make obvious the seat-belt warning device as claimed in claim 1 and Mahbub further shows that the claimed optical imaging system comprises a lighting device for illuminating the space which is to be monitored (Column 3, Lines 16-24 disclose the use of additional lighting for the image system. Column 3, Lines 55-63 teach a light pattern generator which both supplies additional lighting and can be used to put markings on the object for analysis purposes).

(10) Response to Argument

In the appeal brief filed on February 22, 2010, in the fourth paragraph of page 10, the appellant argues that the relied upon references (Mahbub and Okada) do not teach alone, nor render obvious together, all of the limitations of appellant's claims 1 and 3-7 and thus, a prima facie case of obviousness does not exist. Specifically, as seen in the fourth paragraph of page 9, the limitation not taught or rendered obvious is the evaluation of a recorded situation image on the basis of contours and/or edges contained in the recorded image.

Mahbub discloses acquiring a 3 dimensional (3D) image and processing it to receive a 2 dimensional (2D) representation (abstract) that is used for further processing as starting at Column 10, Line 48. The claim language under appeal does not provide a detailed description of the situation image. The disclosed 3D and 2D images of Mahbub read on the claimed situation image for this reason. Both images of Mahbub are recorded as part of an imaging system and both are evaluated for various reasons. The 3D image is evaluated as in Column 9, Line 1 –

Art Unit: 2612

Column 10, Line 47. The 2D image is evaluated as in Column 10, Line 48 - Column 14, Line 10. Mahbub discloses evaluating an image for the presence of a somewhat elongated and arched surface (Column 8, Lines 49-51).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made that both the 3D and 2D images are recorded in order to be processed in the future and that the 2D representation of the 3D image originates from the 3D image so that the processing of contours and/or edges is completed based on the original 3D image regardless of whether the 3D or 2D image is evaluated.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Ryan W Sherwin/

Examiner, Art Unit 2612

Conferees:

/Daniel Wu/
Supervisory Patent Examiner, Art Unit 2612

/BENJAMIN C. LEE/

Supervisory Patent Examiner, Art Unit 2612